

CHAPTER 160

BUILDING CODE

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160.01 ADOPTION OF 2018 INTERNATIONAL BUILDING CODE. Pursuant to published notice and public hearing as required by law, 2018 International Building Code is hereby adopted in full except for such portions as may hereinafter be deleted, modified or amended. An official copy of the 2018 International Building Code is on file in the office of the Clerk.

160.02 AMENDMENTS, MODIFICATIONS AND DELETIONS. The following amendments, modifications, additions and deletions to the 2018 International Building Code are hereby made:

Delete Section 3109.1 replace with the following amendments:

A. Swimming Pools. No person shall maintain or use a swimming pool unless it conforms to the requirements of this chapter, and in the event that any swimming pool is found not to comply with the terms of this chapter, it shall constitute a nuisance within the definition of Chapter 50 of this Code of Ordinances and the City may invoke remedies and penalties provided in said chapter. This section provided for construction regulations and permit fees with regard to swimming pools.

B. The definition of a swimming pool shall be: SWIMMING POOLS. Any structure intended for swimming, recreational bathing or wading that has the capacity of containing water over 24 inches (610 mm) deep. This includes in-ground, above-ground and on-ground pools; hot tubs; spas and fixed-in-place wading pools.

C. Permit Required. No person shall construct or any alteration, addition, remodeling or other improvements to a swimming pool without a permit therefore. Swimming pools shall be maintained in accordance with the provisions of this chapter.

D. Application. A person seeking a permit shall make an application to the Clerk for such permit. The plans and specifications and plot plan, as well as other pertinent explanatory data, shall be submitted with each application.

E. Issuance of Permit. If the plans and specifications and plot plans meet the requirements of this chapter, a permit fee as specified in chapter xx shall be paid to the Development Services Department.

F. Design Requirements. The materials used in lining swimming pools shall be light in color, impervious to water, and provide a tight tank with smooth and easily cleaned surfaces. Sand or dirt bottoms are prohibited.

G. Plumbing. All cross connections between the City water supply or the sewer system in the plumbing of a swimming pool shall be constructed in accordance with the 2018 Uniform Plumbing Code.

H. Electrical. All electrical construction shall be installed in accordance with the current National Electric Code.

I. This Ordinance shall apply to all existing and new swimming pools. All existing swimming pools shall comply within fourteen (14) days of the effective date of this ordinance.

For reference the IBC states the following:

3109.2 Residential swimming pools

Residential swimming pools shall comply with sections **3109.2.1 through 3109.11**

3109.2.1 General. The provisions of this section shall apply to the design of barriers for pools and spas. These design controls are intended to provide protection against the potential drowning and near drowning by restricting access to such pools or spas. These requirements provide an integrated level of protection against potential drowning through the use of physical barriers and warning devices restricting entry into areas having pools and spas. Where spas or hot tubs are equipped with a lockable safety cover complying with ASTM F1346 and swimming pools are equipped with a powered safety cover that complies with ASTM F1346, the areas where those spas, hot tubs or pools are located shall not be required to comply with Sections 3109.3 through 3109.11.

Exceptions:

1. Spas and hot tubs with a lockable safety cover that complies with ASTM F 1346.
2. Swimming pools with a powered safety cover that complies with ASTM F 1346.

3109.2.2 Outdoor swimming pools and spas. Outdoor pools and spas and indoor swimming pools shall be surrounded by a barrier that complies with Sections 3109.3 through 3109.11.

3109.3 Barrier height and clearances. Barrier heights and clearances shall be in accordance with all of the following:

1. The top of the barrier shall be not less than 48 inches (1219 mm) above grade where measured on the side of the barrier that faces away from the pool or spa.
2. Where the top of the pool or spa structure is above grade, the barrier shall be installed on grade or shall be mounted on top of the pool or spa structure. Where the barrier is mounted on the top of the pool or spa, the vertical clearance between the top of the pool or spa and the bottom of the barrier shall not exceed 4 inches (102 mm).

3109.4 Openings. Openings in the barrier shall not allow passage of a 4-inch-diameter (102 mm) sphere.

3109.5 Closely spaced horizontal members. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches (1143 mm), the horizontal members shall be located on the pool or spa side of the fence. Spacing between vertical members shall not exceed 1 3/4 inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 3/4 inches (44 mm) in width.

3109.6 Widely spaced horizontal members. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm). Where there are decorative cutouts within vertical members, the interior width of the cutouts shall not exceed 1 3/4 inches (44 mm).

3109.7 Chain link dimensions. The maximum opening formed by a chain link fence shall be not more than 1 3/4 inches (44 mm). Where the fence is provided with slats fastened at the top and bottom which that reduce the openings, such openings shall be not greater than 1 3/4 inches (44 mm).

3109.8 Gates. Access gates shall comply with the requirements of Sections 3109.9 through 3109.11 and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool or spa, shall be self-closing and shall have a self-latching device.

3109.9 Utility or service gates. Gates not intended for pedestrian use, such as utility or service gates, shall remain locked when not in use.

3109.10 Double or multiple gates. Double gates or multiple gates shall have at least not fewer than one leaf secured in place and the adjacent leaf shall be secured with a self-latching device. The gate and barrier shall not have openings larger than 1/ 2 inch (12.7 mm) within 18 inches (457 mm) of the latch release mechanism.

3109.11 Onground residential pool structure as a barrier. An onground residential pool wall structure or a barrier mounted on top of an onground residential pool wall structure shall serve as a barrier where all of the following conditions are present:

1. Where only the pool wall serves as the barrier, the bottom of the wall is on grade, the top of the wall is not less than 48 inches (1219 mm) above grade for the entire perimeter of the pool, the wall complies with the requirements of Section 3109.3 and the pool manufacturer allows the wall to serve as a barrier.
2. Ladders or steps used as means of access to the pool are capable of being secured, locked or removed to prevent access except where the ladder or steps are surrounded by a barrier that meets the requirements of Section 3110.
3. Openings created by the securing, locking or removal of ladders and steps do not allow the passage of a 4-inch (102 mm) diameter sphere.
4. Barriers that are mounted on top of onground residential pool walls are installed in accordance with the pool manufacturer's instructions.

3109.12 Prohibited locations.

Barriers shall be located so as to prohibit permanent structures, equipment or similar objects from being used to climb the barriers.

Delete Chapter 113 Board of Appeals - Replace with:
City Ordinance Chapter 28 Board of Appeals

Delete Code Section: IBC 308.5.4

Replace with and add the following language:

308.5.4 Eight or fewer persons receiving care in a dwelling unit. Eight or fewer persons receiving care in a dwelling unit. A facility such as the above

within a dwelling unit and having eight or fewer persons receiving custodial care shall be classified as a group R-3 occupancy or shall comply with the International Residential Code.

Exception: Day care facilities that provide custodial care for 16 or fewer persons for less than 24-hours per day in a single-family dwelling, and where registered with the State of Iowa Department of Human Services as child development homes on or before January 1, 2017, are permitted to comply with the International Residential Code."

Delete Code Section: IBC 310.4.1

Replace with and add the following language:

310.4.1 Care facilities within a dwelling. Care facilities within a dwelling refer to 308.5.4.

Modify Code Section: IBC 403.3.2 (correlation: IFC 914.3.1.2)

Replace with the following language:

403.3.2 Water supply to required fire pumps. Required fire pumps shall be supplied by connections to a minimum of two water mains located in different streets. Separate supply piping shall be provided between each connection to the water main and the pumps. Each connection and the supply piping between the connection and the pumps shall be sized to supply the flow and pressure required for the pumps to operate.

Exception: Two connections to the same main shall be permitted provided the main is valved such that an interruption can be isolated so that the water supply will continue without interruption through at least one of the connections.

Delete Code Section: IBC 423.4 (including subsections 432.4.1 and 423.4.2)

Replace with and add the following language:

423.4 Group E occupancy. In areas where the shelter design wind speed for tornadoes is 250 mph in accordance with Figure 304.2 (1) of ICC 500, all Group E occupancies with a program occupant load of 50 or more shall have a storm shelter constructed in accordance with Chapters 1 through 5 & 8 of ICC 500.

The installation of portable buildings for utilization on the campus or site for educational purposes is considered new construction and classified as Group E occupancies.

Exceptions:

- 1 Group E day care facilities.
2. Group E occupancies accessory to place of religious worship.
3. Buildings meeting the requirements for shelter design in ICC 500.
4. Accessory structures to existing group E sites where the occupancy classification of said structures are classified as Groups A-5 and U

423.4.1 Required Occupant Capacity. The required occupant capacity of the storm shelter shall include all buildings classified as a Group E occupancy on the campus or site (whichever is larger) and shall be the greater of the following:

1. The total occupant load of the classrooms, vocational rooms and offices in the Group E occupancy.
2. The occupant load of any indoor assembly space that is associated with the Group E occupancy.

Exceptions:

1. Where a new building is being added on an existing Group E site, and where the new building is not of sufficient size to accommodate the required occupant capacity of the storm shelter for all of the buildings on-site, the storm shelter shall at a minimum accommodate the required capacity for the new building.
2. Where approved by the code official, the required occupant capacity of the shelter shall be permitted to be reduced by the occupant capacity of any existing storm shelters on the campus or site.

423.4.2 Location. Storm shelters shall be located within the buildings they serve, or shall be located where the maximum distance of travel from not fewer than one exterior door of each building to a door of the shelter serving that building does not exceed 1,000 feet.

IBC Section Replace with the following:

Delete Code Section: IBC 502.1

Replace with the following language:

502.1 Address identification. New and existing buildings shall have *approved* address numbers, building numbers or *approved* building identification placed in a position that is plainly legible and visible from the street or road fronting the property. These numbers shall be black or white and shall contrast with their background. Where required by the *fire code official*, address numbers shall be provided in greater dimension or additional *approved* locations to facilitate emergency response. Address numbers shall be Arabic numbers or alphabetical letters. Numbers and letters shall be a minimum height and a minimum stroke

width as dictated by Table 505.1. Where access is by means of a private road and the building cannot be viewed from the *public way*, a monument, pole or other sign or means shall be used to identify the structure. Address numbers shall be maintained.

Table 502.1
Minimum Height and Stroke Width^{a b}

Distance from the centerline of the Public Way (ft)		Minimum Height (in)	Minimum Stroke Width (in)
Less than 100		4	1/2
100	199	6	3/4
200	299	8	1
For each additional 100		Increase 2	Increase 1/2

^a Exterior suite identification, minimum height shall be 4 inches and stroke width shall be 1/2 inch.

^b Interior suite identification, minimum height shall be 2 inches and stroke width shall be 1/4 inch.

Add Exception to Code Section: IBC 707.5
Add the following language (Exception #3):

707.5 covers fire barriers/continuity and this adds an exception for shaft enclosures to the section.

3. Shafts required to be constructed as per section 713.3.2 having exterior walls that are not required to be fire rated per section 707.4 shall be permitted to be constructed of materials permitted by the building type of construction so long as a complete non-combustible separation of 2 hours is provided between the shaft and adjoining structure. In addition, the provisions of section 1023.7 shall be met.

Delete Code Section: IBC 713.3

Replace with the following language:

713.3 Materials. Shaft enclosures shall be as described in Sections 713.3.1 and 713.3.2.

Add Code Section: IBC 713.3.1

Add the following language:

713.3.1 – 1 Hour Shafts. Shafts that are allowed to have a fire resistance rating of 1 hour or less are allowed to be constructed of materials permitted by the building type of construction.

Add Code Section: IBC 713.3.2

Add the following language:

713.3.2 – 2 Hour Shafts. Shafts that are required to have a fire resistance rating of 2 hours or more serving Interior exit stairs or Interior exit ramps shall be constructed of concrete or masonry. All other shafts that are required to have a fire resistance rating of 2 hours or more shall be constructed of non-combustible materials.

Insert New Code Section: IBC 902.1.1.1 (correlation: IFC 901.4.6.1.1)

Language:

902.1.1.1 Fire Sprinkler Riser Room.

A fire sprinkler riser room shall be separated from the electrical room. The riser room shall have no electrical panels, devices, or apparatus inside the room other than the outlets or support equipment (lighting, air compressor, and heater) required for the use of the fire sprinkler system and/or the fire alarm panel. The sprinkler riser room shall not be accessed from the electrical room, but the electrical room may be accessed from the fire riser room.

Delete Section 903.2 Fire Sprinkler requirements, inserted in the Fire Code Ordinance Chapter 154

903.4.2 Alarms.

An approved weather proof audible device suitable for outdoor use with 110 candela visual signal shall be connected to every automatic sprinkler system. Such sprinkler water-flow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Alarm devices shall be provided on the exterior of the building in an approved location. Where a fire alarm system is installed, actuation of the automatic sprinkler system shall actuate the building fire alarm system.

Modify Code Section: IBC 903.3.1.2 (correlation: IFC 903.3.1.2)

Replace with the following language:

903.3.1.2 NFPA 13R sprinkler systems. *Automatic sprinkler systems in Group R and I occupancies up to and including four stories in height in buildings not exceeding 60 feet (18 288 mm) in height above grade plane shall be installed throughout in accordance with NFPA 13, unless allowed to be sprinklered in accordance with NFPA 13D by the International Building Code. The number of stories of Group R occupancies constructed in accordance with Sections 510.2*

and 510.4 of the *International Building Code* shall be measured from the horizontal assembly creating separate buildings.

903.2.11.1.3 Basements

Where any portion of a *basement* is located more than 75 feet (22 860 mm) from openings required by Section 903.2.11.1, the *basement* shall be equipped throughout with an *approved automatic sprinkler system*.

Insert Code Section: IBC 905.3.9 (correlation: IFC 905.3.9)

Language:

905.3.9 Building Footprint and Access

Where the most remote portion of a floor or story is more than 400 feet from a hose connection or fire department access road the fire code official is authorized to require standpipes to be provided in *approved* locations. Class I manual standpipes shall be allowed.

Modify Code Section: IBC 907.2 (correlation: IFC 907.2)

Add the following exception:

3. Prior to July 1, 2016 any jurisdiction requiring reduced fire areas or reduced occupant loads in 907.2.1 through 907.2.23 may continue to utilize these methods as previously established by local jurisdiction determining the requirements for fire alarm systems in Section 907.2.1 through 907.2.23.

Insert Code Section: IBC 907.1.4 (correlation: IFC 907.1.4)

Language:

907.1.4 FACP (Fire Alarm Control Panels)

Each building shall have no more than 1 FACP.

Installation of fire alarm panel shall not exceed six feet in height measured from the floor to the top of the unit.

Exception: Suppression system releasing panels are not required to meet the height requirement or the limitation in the number of panels.

Modify Code Section: IBC 907.6.6 (correlation: IFC 907.6.6)

Replace with the following language:

907.6.6 Monitoring

Fire alarm systems required by this chapter or by the International Building Code shall be monitored by a central station approved and listed under UL 827 in accordance with NFPA 72.

Exception: Monitoring station is not required for:

1. Automatic sprinkler and fire alarm systems in one- and two- family dwellings.

Section 907.2.9, of the IFC (correlation: IBC 907.2.9), is hereby amended by adding a new section, 907.2.9.4 and subsections 907.2.9.4.1 through 907.2.9.4.3 as follows:

907.2.9.4 Group R-4. Fire alarm systems and smoke alarms shall be installed in Group R- 4 occupancies as required in Sections 907.2.10.1 through 907.2.10.3.

907.2.9.4.1 Manual fire alarm system. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group R-4 occupancies.

Exceptions:

1. A manual fire alarm system is not required in buildings not more than two stories in height where all individual sleeping units and contiguous attic and crawl spaces to those units are separated from each other and public or common areas by not less than 1-hour fire partitions and each individual sleeping unit has an exit directly to a public way, egress court or yard.
2. Manual fire alarm boxes are not required throughout the building where all of the following conditions are met:
 - 2.1 The building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2.
 - 2.2 The notification appliances will activate upon sprinkler water flow.
 - 2.3 Not fewer than one manual fire alarm box is installed at an *approved* location.
3. Manual fire alarm boxes in resident or patient sleeping areas shall not be required at *exits* where located at all nurses' control stations or other constantly attended staff locations, provided such stations are visible and continuously accessible and that the distances of travel required in Section 907.4.2.1 are not exceeded.

907.2.10.2 Automatic smoke detection system. An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be installed in corridors, waiting areas open to corridors and habitable spaces other than sleeping units and kitchens. Exceptions: 1. Smoke detection in habitable spaces is not required where the facility is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1. 2. An automatic smoke detection system is not required in buildings that do not have interior corridors serving sleeping units and where each sleeping unit has a means of egress door opening directly to an exit or to an exterior exit access that leads directly to an exit.

907.2.10.3 Smoke alarms. Single- and multiple-station smoke alarms shall be installed in accordance with Section 907.2.11.

Modify Code Section: IBC 910.2.1 (correlation: IFC 910.2.1)

Replace with the following language:

910.2.1 Group F-1 or S-1. Smoke and heat vents installed in accordance with Section 910.3 or a mechanical smoke removal system installed in accordance with Section 910.4 shall be installed in buildings and portions thereof used as a Group F-1 or S-1 occupancy having more than **30,000** square feet (2787 m²) of undivided area. In occupied portions of a building equipped throughout with an automatic sprinkler system in accordance with 903.3.1.1, where the upper surface of the story is not a roof assembly, a mechanical smoke removal system in accordance with Section 910.4 shall be installed.

Exception: Group S-1 aircraft repair hangars.

Modify Code Section: IBC 1008.3.3 (correlation: IFC 1008.3.3)

Replace Item # 5 with the following language:

1. Restrooms containing at least one water closet/urinal or that are accessible.

1008.3.3 Rooms and spaces. In the event of a power supply failure, an emergency electrical system shall automatically illuminate all of the following areas:

1. Electrical equipment rooms
2. Fire command centers
3. Fire pump rooms
4. Generator rooms
5. Public restrooms that contain more than one water closet/urinal or that are accessible
6. Meeting/conference rooms with an area greater than 400 square feet.
7. Classrooms in an E occupancy with an area greater than 400 square feet.

Modify Code Section: IBC 1009.2 (correlation: IFC 1009.2)

Add Item # 11 with the following language:

11. Components of exterior walking surfaces shall be concrete, asphalt, or other approved hard surface.

Modify Code Section: IBC 1010.1.6 (correlation: IFC 1010.1.6.1)

Replace with the following language:

1010.1.6.1 For landings required by Section 1010.1.5 to be at the same elevation on each side of the door exterior landings at doors shall be provided with frost protection.

Modify Code Section: IBC 1010.1.9.1 (correlation: IFC 1010.1.9.1)

Replace with the following language:

1010.1.9.1 Hardware. Door handles, pulls, latches, locks and other operating devices on doors required to be accessible by Chapter 11 of the International Building Code shall not require tight grasping, tight pinching or twisting of the wrist to operate. This includes thumb turn locks.

Insert Code Section: IBC 1013.1.1 (correlation: IFC 1013.1.1)

Language:

1013.1. 1 Additional Exit Signs.

Exit signs may be required at the discretion of the Code Official to clarify an exit or exit access.

Add Code Section: IBC 1015.9 (correlation: IFC 1015.9)

Insert the following language:

1015.9 Walking surfaces. A guard shall be provided along retaining walls where a finished walking surface such as sidewalks, patios, driveways, parking lots or similar is located on the top side of a retaining wall. The guard shall be installed along any portion of the wall measuring 30 inches or greater in height measured at any point within 36 inches horizontally to the edge of the open side. A guard shall not be required along portions of the retaining wall where the horizontal distance between the edge of the finished walking surface and the face of the wall is greater than 72 inches.

Insert Code Section: IBC 1028.5.1 (correlation: IFC 1028.5.1)

Language:

1028.5.1 Components of exterior walking surfaces shall be concrete, asphalt, or other approved hard surface.

Insert Code Section: IBC 1030.4.3 (correlation: IFC 1030.4.3)

Language:

1030.4.3 Window wells drainage. All window wells shall be provided with approved drainage.

Modify Code Section: IBC 1301.1

Replace with the following language:

Section 1301.1 Scope. The provisions of the International Energy Code as currently adopted and amended by the Iowa State Building Code Bureau shall apply to all matters governing the design and construction of buildings for energy efficiency. Administration shall be as prescribed in chapter 1 of the currently State adoption of the IECC and these regulations shall be known as the **City of Grimes.**

Modify Code Section: IBC 1608.2

Replace with the following language:

1608.2 Ground Snow Load. The ground snow load to be used in determining the design snow load for roofs is hereby established at 30 pounds per square foot. Subsequent increases or decreases shall be allowed as otherwise provided by code, except that the minimum allowable flat roof snow load may be reduced to not less than 80 percent of the ground snow load.

160.02 TEMPORARY PERMIT. The Building Administrator or Building Division Designee may approve the construction of part of a building or structure and shall endorse upon the plans and specifications for such part such approval before the entire plans and specifications for the whole building or structure have been submitted and approved, provided adequate information and detailed statements have been filed, complying with the pertinent requirements of this Code. Upon approval of the plans and specifications the Clerk shall issue a temporary permit, and the holder of such permit shall proceed at his or her own risk without assurance that the permit for the entire building or structure shall be granted.

160.06 CONFLICT WITH STATE LAWS. Nothing in this chapter or in the 2018 International Building Code shall be construed to be in conflict with the State laws or State Housing Code. In the event of such conflict, the State laws will prevail.

160.07 ADMINISTRATION AND ENFORCEMENT. This chapter shall be enforced by the Building Official. No building permit or certificate of occupancy shall be issued by the Clerk unless in accordance with the provisions of this chapter.

160.08 CLIMATE AND GEOGRAPHICAL CRITERIA

Amend IRC Table R301.2(1) to read as follows:

TABLE R301.2(1) CLIMATE AND GEOGRAPHICAL CRITERIA

Ground Snow Load	Wind Design		Seismic Design Category	Subject to Damage From			Winter		Flood Hazards	Air Freezing Index	Mean Annual Temp
	Speed MPH	Topograph effects		Weathering	Frost line Depth	Termite	Design Temp	Ice Barrier Req'd	NFIP Acceptance Zone C		
30 PSF	90	NO	A	Severe	42"	Mod/ Heavy	-5F	Yes	30-Sep-83 – No local amendments.	1833	48.6

Severability Clause. If any section, provision, or part of this ordinance shall be adjudged invalid or unconstitutional such adjudication shall not affect the validity of the ordinance as a whole or any section, provision or part thereof not adjudged invalid or unconstitutional.